

dumb.

About one month ago there appeared a list of SSHS listing of important graduates that had been selected to be honored for their achievements, during their lifetime. You noticed that we had two radio amateurs listed, Robert Seivers, W9FJT and Sheldon Hines, can't remember his call, Another name that I believed should have appeared on that list was a Robert Harris who taught at South. This Robert like Selver's and Hine's helped in our W.W.II win. A Mr. Harris during that period presented a model of his idea for a possible new product to the Magnavox Co. The model that he displayed was quite bulky. It was solenoid activated by a trigger. The device generated voltage at the output. An engineering group at Magnavox lead by John Koontz developed the product, which was used to fire the bazooka, used during W.W.II. Another side product was adapted by several camera companies to fire off their flash bulb. I have a model that uses dial light bulb attached to output, to illustrate the voltage output. Mr. Harris had a son who taught at South Side.

Also had a qso with another former FWRC President, Harry Harvey, N9AR. Some time after Harry retired from ITT, he received a call from the Company requesting his help. A customer in Egypt required some new equipment. However they would only talk to Harry. So now Harry is working one day a week. Don't forget Harry's wife who is a great surgical nurse, ask W9PFO, Esther.

HISTORY

With these advantages it is somewhat difficult to understand the fact that during the next seven years the audion was but little used. Many

reasons have been advanced for this state of affairs. Undoubtedly the principal cause for its lack of popularity among amateurs was its prohibitive cost. At first it was but little better than the best of other available detectors, the audible difference produced by its increased sensitivity not being very great, and the young lads who composed the bulk of amateur experimenters could not well invest such as audion equipment demanded at that time. The commercial interests were mainly in a bad way financially, due to untoward exploitation of capitalization incompatible with the state of the art. Many services were hampered by possible patent litigation. The fact that the principles, use operation, and production of the audion were all only slightly understood contributed to the period of inattention. But the audion could well afford to wait for the great destiny that lay ahead of it.

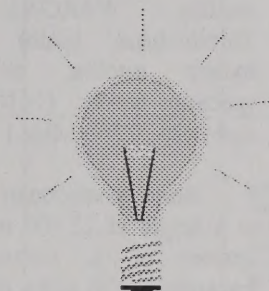
Meanwhile the electrolytic detector became popular among amateurs, particularly following the publication of complete constructional details in the Scientific American and Electrician & Mechanic, in 1906. The instrument which was to attain the most widespread use of any detector for fifteen years to come, however, - the crystal detector - was even then in the offing.

In 1906 the silicon detector was invented by Greenleaf W. Pickard. In the American deForset Wireless Telegraph Co., invented the carbonundum detector. Thus, in two forms, there came into existence, the crystal detector, a device to which all early amateurs owe a great debt.

SK this month from Dec. QST.

Nancy J. Scott, N9FRX, Huntertown, IN

73, Have a good Holiday
W9TC & W9PFO



W5YI REPORT

**SATELLITE CELLULAR PHONES
ARE ON THE WAY**GMPCS -
Global Mobile Personal
Communications by Satellite

What started out as an wild idea by ham operator, Bary Bertiger, WA7UKR is about to become reality! It., an unbelievable story. It seems that in 1985, Bray's wife Karen wanted to place a phone call from a remote area in the Bahamas back to their home in Chandler, AZ.

That got Bertiger, a Motorola engineer and now VP and general manager of its satellite-systems group, thinking. "Why not create a satellite-based cellular telephone system in the sky?" Instead of the user moving through a cell, the satellite would move overhead to the user.

Low Earth Orbit (LEO) satellites such as AMSAT's Phase 3D orbit the earth every couple of hours at a height of a few hundred miles above the earth. Their communications range depends upon the orbit. Since their moving footprint is only about 2,000 miles in diameter, a global communication LEO

system requires a large number of satellites.

Little LEOs use a single satellite. Big LEO systems need multiple satellites. And like a terrestrial cellular system it needs to be able to hand over the service to the next neighboring satellite. WARC-92 (in Malaga-Torremolinos, Spain) allocated the mobile satellite service (MSS) spectrum needed. (1610-1626.5 MHz and 2483.52500 MHz.)

Since geostationary satellites orbit at a height of 22,300 miles it takes a quarter of a second for voice transmissions to make the 44,000 mile trip. (Speed of light - or radio - is 186,000 miles-per-second.) Besides being less expensive, there is no round-trip delay in LEO satellite systems. They can make the round trip almost instantly. The low altitude of Iridium satellites allows easy radio links with portable cellular radiotelephones on earth, using small antennas rather than satellite dishes. It also supports reuse of frequencies in a similar fashion to landbased cellular systems.

The Iridium system was conceived by engineers at Motorola's Satellite Communications Division in 1987. It got its name from the 77th element on the periodic table because the original design called for 77 satellites. Their idea was to orbit a constellation of small (only 3-by-6 ft), lightweight (under 1,000 pound) LEO satellites with telephone switching equipment on board that could be built, launched and replaced economically. Iridium's 66 satellites will fly in eleven nearly polar orbits tilted 86 degrees to blanket the globe.

Motorola applied to the FCC for a license to construct and operate the Iridium system in December 1990. Four years later (January 31, 1995), the FCC awarded Motorola Satellite Communications, Inc., a license to construct, launch and operate the Iridium system.

Motorola's Iridium system will be able provide a global personal communications network including voice, data, fax or paging. Its 66 interconnected satellites will orbit 420 nautical miles above the earth. Its footprint will consist of 48 spot beams covering the entire earth's surface. The scientific community has nicknamed the system, "Bigfoot" since every point on the earth's surface is in continuous line-of-sight with one of the satellites. Each satellite is connected to four others and has a lifetime design life of five to eight years.

The system will greatly simplify communications for business professionals, travelers, residents of rural or undeveloped areas, disaster relief teams, and other users who need the features and convenience of a wireless handheld phone for worldwide use. Callers using the new system will not need to know the location of the person being called; they will simply dial that person's number to be connected instantly. A NASA-commissioned study compared mobile satellite services with personal computers, in terms of their potential impact on our lives.

Iridium uses two frequency bands. The subscriber and LEO satellites are connected via the L-band (16161626.5 MHz). The Ka band (29.2 GHz uplink/19.5 GHz downlink) is used between the satellite and terrestrial gateways which will interface with the public switched telephone network (PSTN.) Intersatellite crosslinks take place at 23.2 GHz. The digital standard will be TDMA (time division multiple access) which was accepted by the cellular industry in 1989.

The majority of calls will originate or terminate over conventional communications hardware. The Iridium handset is the primary means which callers will communicate directly through the Iridium network. Most

phone calls will never go through a satellite. Its dual mode capability will allow it to work as a terrestrial wireless cellular telephone or a satellite telephone.

The cost of an Iridium phone call is rumored to be \$3.00 per minute at the beginning! Certainly not cheap! Batteries will yield one hour of talk time and 24 hours of standby. Solar-powered portable and redeployable satellite phone booths are being designed to provide public access to Iridium in remote areas without telecommunications.

The first three Iridium satellites are scheduled to be launched next month from a 250 ton Delta rocket. Russian and Chinese rockets will also launch future Iridium satellites.

Iridium will soon have competitors. At least four more systems are on the way. But the biggest, most expensive LEO system with the most satellites deployed will be Motorola's Iridium. It will cost \$3.4 billion ... more than the total of the other two U.S.-licensed Big LEO systems (GlobalStar and Odyssey) combined.

Motorola is the biggest single investor, but there are other American companies including Sprint, Raytheon and Lockheed. Most of the financing has been sold in chunks to an international consortium of leading telecommunications and industrial companies from Russia, Korea, China (Hong Kong), Africa, Italy, Thailand, Germany, Canada, Saudi-Arabia, India, Taiwan, South America and Japan. Iridium plans to be ready for full scale operation in 1998.



January 1997
S M T W T F S
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12 13 14 15 16 17 18
19 20 21 22 23 24 25
26 27 28 29 30 31

February 1997

March 1997
S M T W T F S
1
2 3 4 5 6 7 8
9 10 11 12 13 14 15
16 17 18 19 20 21 22
23 24 25 26 27 28 29
30 31

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 Hunt ARES 20:00 Delaware QSO Party>
2 Swap Net 19:00 Sloppy Code 21:00 N. Amer Sprint Phone Allen Co Foxhunt 13:30	3 <Delaware QSO Party	4 Huntington ARES 20:00	5 Whitley ARES 19:15 21 Repeater Grp 21:00	6 Foxtrof Net 19:00	7	8 Hunt ARES 20:00 IDRA WW RTTY WPX Contest> Dutch PACC Contest> Asia-Pac. Sprint CW YL-OM Contst Phone> RSGB 1.8 MHz CW>
9 Swap Net 19:00 <IDRA WW RTTY WPX Contest <Dutch PACC Contest <RSGB 1.8MHz CW N. Amer Sprint CW Whitley Co Foxhunt 13:30	10 <YL-OM Contst Phone	11 Huntington ARES 20:00	12 Whitley ARES 19:15 21 Repeater Grp 21:00	13 Foxtrof Net 19:00 FWRC Board 19:30	14 Valentines Day	15 Hunt ARES 20:00 ARRL Int DX CW>
16 Swap Net 19:00 Sloppy Code 21:00 < ARRL Int DX CW	17 President's Day < ARRL VHF Sweep	18 Huntington ARES 20:00	19 Whitley ARES 19:15 21 Repeater Grp 21:00	20 Foxtrof Net 19:00	21 CQ 160m Ctst Phone> FWRC Meeting 19:30	22 Hunt ARES 20:00 N Carolina QSO Party> REF Contest SSB > UBA Contest CW > YL-OM Contest CW > RGSB 7 MHz DX CW>
23 Swap Net 19:00 Sloppy Code 21:00 <CQ 160m Ctst Phone <N Carolina QSO Party <REF Contest SSB <UBA Contest CW <RGSB 7 MHz DX CW	24 <YL-OM Contest CW	25 Huntington ARES 20:00	26 Whitley ARES 19:15 21 Repeater Grp 21:00	27 Foxtrof Net 19:00	28	

Check QST and CQ for Contest Times and Rules

(Times are in Eastern Standard Time GMT-5 hours)

[Key: > Event Begins < Event Ends]

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NET FREQS.

DAILY NET FREQS

TNT 148.76 | FWRC Swap 148.94
WCARC Sunday Net 444.550 19:45
Ft Wayne 6m 50.58 (simplex) 19:00

Sloppy Code 7.1405
21 Repeater Group 147.150
IMO Traffic 148.88 18:30

Huntington ARES 146.685
Foxtrof FM/AM 28.100 SSB 28.405
Auburn 147.380 18:00

Whitley ARES 444.550 w/ 146.48 simplex link
Mobile Ten SSB/CW 28.400 Saturdays 19:00

December 1996
S M T W T F S
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8 9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 31

January 1997

February 1997
S M T W T F S
1
2 3 4 5 6 7 8
9 10 11 12 13 14 15
16 17 18 19 20 21 22
23 24 25 26 27 28

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 New Year's Day Whitley ARES 19:15 21 Repeater Grp 21:00	2 Foxrot Net 19:00	3	4 Hunt ARES 20:00 ARRL RTTY Roundup
5 Swap Net 19:00 Sloppy Code 21:00 <ARRL RTTY Roundup <Hunting Lions OTA < N. Amer QSO CW Midwinter Phone Ctst Allen Co Foxhunt 13:30	6	7 Huntington ARES 20:00	8 Whitley ARES 19:15 21 Repeater Grp 21:00	9 Foxrot Net 19:00 FWRC Board 19:30	10 Japan DX 160-40m	11 Hunt ARES 20:00 Midwinter CW Contes: Hunting Lions OTA> N. Amer QSO CW >
12 Swap Net 19:00 Sloppy Code 21:00 < Japan DX 160-40m Whitley Co Foxhunt 13:30	13	14 Huntington ARES 20:00	15 Whitley ARES 19:15 21 Repeater Grp 21:00	16 Foxrot Net 19:00	17 FWRC Meeting 19:30	18 Hunt ARES 20:00 N. Amer QSO Phone> ARRL VHF Sweep >
19 Swap Net 19:00 Sloppy Code 21:00 <N. Amer QSO Phone	20 Martin Luther King, Jr. Day < ARRL VHF Sweep	21 Huntington ARES 20:00	22 Whitley ARES 19:15 21 Repeater Grp 21:00	23 Foxrot Net 19:00	24 CQ 160m Contst CW>	25 Hunt ARES 20:00 REF Contest CW> UBA Contest Phone>
26 Swap Net 19:00 Sloppy Code 21:00 < CQ 160m contst CW < REF Contest CW < UBA Contest Phone	27	28 Huntington ARES 20:00	29 Whitley ARES 19:15 21 Repeater Grp 21:00	30 Foxrot Net 19:00	31	

Check QST and CQ for Contest Times and Rules

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NET FREQS:

DAILY NET FREQS

TNT 146.76 | FWRC Swap 146.84
WCARC Sunday Net 444.550 19:45
Ft Wayne 6m 50.58 (simplex) 19:00

Sloppy Code 7.1405
21 Repeater Group 147.150
IMO Traffic 148.88 18:30

Huntington ARES 146.685
Foxrot FM/AM 29.100 SSB 28.405
Auburn 147.360 18:00

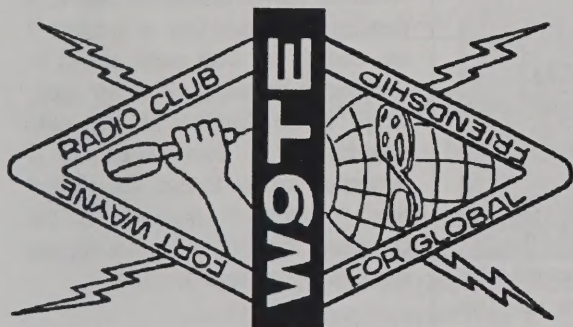
Whitley ARES 444.550 w/ 148.48 simplex link
Mobile Ten SSB/CW 28.400 Saturdays 19:00

The Fort Wayne Radio Club
P O Box 15127
Fort Wayne, IN 46885

BULK RATE
U.S. POSTAGE
PAID
FORT WAYNE, IN
PERMIT 2072

To:

K90MA/KA9YYI
JIM & ANNE PLIETT
16702 WAPPES RD
CHURUBUSCO, IN 46723-9018



January

1997

HAMSPLATTER



**FORT WAYNE
RADIO CLUB,
Fort Wayne, Indiana**



H a m s p l a t t e r



You say you missed last months FWRC Christmas party? I offer you my condolences. We had great live music, lots of great food, Old Saint Nick, the Ding-A-Lings, we did the Macerana, the Curly Shuffle, the Twelve days of Christmas and more. Boy were some of our members surprised when Santa opened his sack of goodies! Congratulations to Jim and Anne Pliett for receiving the well deserved "Chia Carl" head, Kevin N9IWW for his new "product line", Dino "Gus" Raptis for receiving his own Greek turtle catching license, and I hope Dave Evans doesn't over inflate his new hand warmer. Do you think Scott N9VZJ will now get that 94 link up and running?, he should, Santa furnished him with all of the new "state of the art" equipment to get the job done. Before Santa left the party to return back to the North Pole he was awarded his own personal ding-a-ling weighing approximately 80lbs. It was a cast iron school bell that had been removed from the one room school house in which Jim Pliett had once attended. You say you missed the FWRC Christmas party? YOU REALLY MISSED IT !!!

This years "ATV Talk to Santa" was once again a great success. Many thanks to all of those who participated, you gave the greatest gift of all. Carl Rittenhouse was this years Santa and did a great job.

An important bit of business has to be taken care of at this months

meeting. We need to elect a new President for 1997. My term expired December 31st. We do however have a slate for this months election. Jim Pliett K9OMA has put his name in for President and Dave Evans has agreed to run for the Board of Directors position which will also need to be filled. The floor will also be opened for nominations at the meeting.

FWRC AUCTION!

It's time once again for our annual FWRC auction. This is an opportunity for you to clean out the shack of those unwanted items and bring home a little cash. The auction will be held at our clubhouse which is the Good Shepherd United Methodist Church located at the corner of Vance and Reed Rd. Please be sure that all of your items are well marked with your call sign and name. Plan on getting there early. We will be open for check

January Meeting:

Friday

January 17, 1997

7:00pm

Good Shepherd
United Methodist
Church

(Located at the corner of
Vance Ave. and Reed Rd.)

in at 6:15pm. You can never tell what kind of bargains may show up. This auction serves as a FWRC fund raising event. We ask that 10% of your sales go toward supporting the club toward upcoming events. OK NOW, I'LL START THE BIDDING. WHO WILL GIVE ME A DOLLAR ?, OK, HOW ABOUT 50 CENTS ?? YOU GUYS ARE CHEEP !!!!!

"Saloon for now" 73"

Cliffie N9MKB



Reminder Dues for 1997

OLD TYME CHATTER

ARTS Hamfest notes:

With the main operator being in the Hospital, I was only allowed two hours to attend the fest. I did meet Cliff our Club President for the first time. Missed some of the OTs like Bob W9JFT and our former Mayor Mike Bums. Was unable to locate the DX group. Congratulations to Carl K9LA for his 315 countries endorsement. Today I received a call from the Club President saying the deadline would be moved ahead this month. I mentioned to him that it appears I am ending up with more errors in spelling in my copy. Is it my age? Help! Since English is the only subject that I ever failed, it is necessary for me to use "Check and Spell," which is installed in the computer. Perhaps the following can explain my current problem.

"I have a spelling checker. It came with my PC. It plainly marks four my revue. Mistake. I cannot see, I'm run this poem threw it, I'm sure your please too no. It's letter perfect in its weight, My checker tolled me sew. Source for this poem is Coastal Corp. Houston, TX. This illustrates one way that computers can make people look

For Sale

- Icom H7737 with power supply PS-55. \$995.00
Contact Ken N9IGY 436-7130

Wanted

- I am writing a computer program to do calculations for different antennas. I would like suggestions on what types of antennas to include and the formulas for the antennas. I would like suggestions for any other ham radio related math to include in this program. Please contact Noel Schutt KB9JHS at 456-9061 or on the W9INX PBBS or through e-mail "NRSchutt@Juno.com"

Beginning with the January issue of the "Hamsplatter" all ads will run on a month by month basis. Please advise me if you need your ad run more than one month or you wish to extend your ad another month.

Thanks and 73,

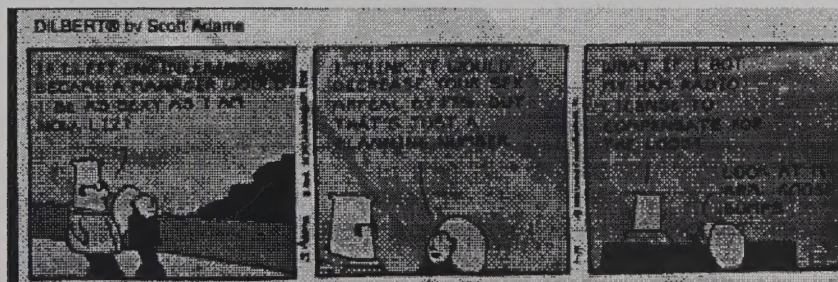
Todd Hargis N9XRG

HOW ABOUT A TICKET FOR THE FWRC DAYTON HAMVENTION BUS TRIP. TICKETS ARE \$15.00 A PERSON. A GUARANTEED GOOD TIME. DON'T DELAY, MAKE YOUR RESERVATIONS NOW BY CALLING KEVIN ADAM N9IWW AT 490-7312

Visit the Fort Wayne Radio Club on the World Wide Web
Address: <http://home.sprynet.com/sprynet/n9xrg/radio.htm>

Do you have an interesting article or cartoon which you can contribute to the Hamsplatter? Do you have some spare equipment collecting dust that you might want to sell? If so please contact me, Todd Hargis N9XRG, at 492-2138 (leave detailed message and phone number if no answer) or I can also be reached via e-mail at "n9xrg@sprynet.com".

February Hamsplatter Deadline: *February 1, 1997*



Membership Data: (Give this form to the treasurer at any FWRC meeting or mail to the address below)

Name _____ Call _____ Class: N T G A AE

Street _____

City _____ State _____ Zip _____ - _____

Home Phone: (_____) _____ - _____

Work Phone: (_____) _____ - _____

Shall we list your address and phone number in the membership roster Y N

Are you presently an ARRL member Y N

Membership Term: (Jan - Dec) (Jul - Dec)

Family Membership: \$21.00yr \$10.50yr immediate family (list all callsigns)

Regular Membership: \$15.00yr \$7.50yr licensed member

Student Membership: \$6.00yr \$3.00yr full time student

Associate Membership: \$15.00yr \$7.50yr unlicensed member

Your Check Number _____ Please pay by check. It's easier for both of us.

Mail to: The Fort Wayne Radio Club
PO Box 15127
Fort Wayne, IN 46885